

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~In an~~ An electronic device for generating user detectable multi-functional feedback with a single component in response to a stimulus signal, the electronic device including a housing, a display, and electronic circuitry located in the housing, ~~the an~~ an improvement of the electronic device comprising:

a lens covering the display, the lens having a transparent area placed over the display[[],];

force sensors attached to the lens for detecting a touch against the lens, the force sensors producing a stimulus signal in response to the touch[[],];

at least one resonating vibrating element attached to an area of said lens extending outside of the display, said single component comprising the lens and the at least one resonating vibrating element, the at least one resonating vibrating element being operable to produce at least two feedback signals selected from a group consisting of a haptic feedback signal, a vibratory alert signal, an audio signal, and a buzzer signal[[],]; and

an electrical drive circuit electrically coupled to said at least one resonating vibrating element for electrically driving said at least one resonating vibrating element with a drive signal based on the stimulus signal; and

wherein one of the housing and said lens is manufactured so that at least one of its resonating frequencies is within a frequency range of said at least one resonating vibrating element.

2. (Canceled).
3. (Currently Amended) ~~In the~~ The electronic device according to claim 1, the electronic device further comprising:
 - means for determining the resonance frequency of one of the housing and the lens by producing a bursted frequency sweep;
 - means for detecting a vibration level with said force sensors; and
 - means for feeding an obtained frequency to said at least one resonating vibrating element.
4. (Currently Amended) ~~In the~~ The electronic device according to claim 1, said at least one resonating vibrating element being operable as an acceleration sensor.
5. (Currently Amended) ~~In the~~ The electronic device according to claim 1, said at least one resonating vibrating element comprising a piezo-bender of one of a unimorph, a bimorph and a multilayer structure.
6. (Currently Amended) ~~In the~~ The electronic device according to claim 5, the electronic device further comprising an external mass attached to said piezo-bender.
7. (Canceled).
8. (Currently Amended) ~~In the~~ The electronic device according to claim 1, the electronic device being a hand-held electronic device.

9. (Currently Amended) A dynamic user interface for generating user detectable multi-functional feedback with a single component in response to a stimulus signal in a device that includes a housing, a display, and electronic circuitry located in the housing, the dynamic user interface comprising:

a lens covering the display, the lens having a transparent area placed over the display[[,]];

force sensors attached to the lens for detecting a touch against the lens, the force sensors producing a stimulus signal in response to the touch[[,]];

at least one resonating vibrating element attached to an area of said lens extending outside of the display, said single component comprising the lens and the at least one resonating vibrating element, the at least one resonating vibrating element being operable to produce at least two feedback signals selected from a group consisting of a haptic feedback signal, a vibratory alert signal, an audio signal, and a buzzer signal; and

an electrical drive circuit (DC) electrically coupled to said at least one resonating vibrating element for electrically driving said at least one resonating vibrating element with a drive signal based on said stimulus signal;

wherein one of the housing and said lens is manufactured so that at least one of its resonating frequencies is within a frequency range of said at least one resonating vibrating element.

10. (Canceled).

11. (Original) The dynamic user interface according to claim 9, further comprising:
means for determining a resonance frequency of one of the housing and the lens by producing a bursted frequency sweep;
means for detecting a vibration level with said force sensors; and
means for feeding an obtained frequency to said at least one resonating vibrating element.

12. (Original) The dynamic user interface according to claim 9, wherein said at least one resonating vibrating element is operable as an acceleration sensor.

13. (Original) The dynamic user interface according to claim 9, wherein said at least one resonating vibrating element comprises a piezo-bender of one of a unimorph, a bimorph and a multilayer structure.

14. (Original) The dynamic user interface according to claim 13, wherein the dynamic user interface further comprises an external mass attached to said piezo-bender.

15. (Canceled).

16. (Original) The dynamic user interface according to claim 9, wherein the device is a hand-held electronic device.

17. (Currently Amended) ~~The electronic device according to claim 1,~~ An electronic device for generating user detectable multi-functional feedback with a single component in response to a stimulus signal, the electronic device including a housing, a display, and electronic circuitry located in the housing, an improvement of the electronic device comprising:

a lens covering the display, the lens having a transparent area placed over the display;
force sensors attached to the lens for detecting a touch against the lens, the force sensors producing a stimulus signal in response to the touch;
at least one resonating vibrating element attached to an area of said lens extending outside of the display, said single component comprising the lens and the at least one resonating vibrating element, the at least one resonating vibrating element being operable to produce at least two feedback signals selected from a group consisting of a haptic feedback signal, a vibratory alert signal, an audio signal, and a buzzer signal; and
an electrical drive circuit electrically coupled to said at least one resonating vibrating element for electrically driving said at least one resonating vibrating element with a drive signal based on the stimulus signal;

wherein the lens is attached to the housing of the electronic device and the resonating vibrating element is attached to the lens so that in response to the drive signal the resonating vibrating element makes the lens resonate at an audible frequency.

18. (Currently Amended) ~~The dynamic user interface according to claim 9,~~ A dynamic user interface for generating user detectable multi-functional feedback with a single component in response to a stimulus signal in a device that includes a housing, a display, and electronic circuitry located in the housing, the dynamic user interface comprising:

a lens covering the display, the lens having a transparent area placed over the display;
force sensors attached to the lens for detecting a touch against the lens, the force sensors
producing a stimulus signal in response to the touch;
at least one resonating vibrating element attached to an area of said lens extending
outside of the display, said single component comprising the lens and the at least one resonating
vibrating element, the at least one resonating vibrating element being operable to produce at least
two feedback signals selected from a group consisting of a haptic feedback signal, a vibratory
alert signal, an audio signal, and a buzzer signal; and
an electrical drive circuit (DC) electrically coupled to said at least one resonating
vibrating element for electrically driving said at least one resonating vibrating element with a
drive signal based on said stimulus signal;

wherein the lens is attached to the housing of the electronic device and the resonating vibrating element is attached to the lens so that in response to the drive signal the resonating vibrating element causes the lens to resonate at an audible frequency.

19. (New) An electronic device for generating user detectable multi-functional feedback with a single component in response to a stimulus signal, the electronic device including a housing, a display, and electronic circuitry located in the housing, an improvement of the electronic device comprising:

a lens covering the display, the lens having a transparent area placed over the display;
force sensors attached to the lens for detecting a touch against the lens, the force sensors producing a stimulus signal in response to the touch;

at least one vibrating element attached to an area of said lens extending outside of the display, said single component comprising the lens and the at least one resonating vibrating element, the at least one resonating vibrating element being operable to produce at least two feedback signals selected from a group consisting of a haptic feedback signal, a vibratory alert signal, an audio signal, and a buzzer signal;

an electrical drive circuit electrically coupled to said at least one vibrating element for electrically driving said at least one resonating vibrating element with a drive signal based on the stimulus signal;

means for determining the resonance frequency of one of the housing and the lens by producing a bursted frequency sweep;

means for detecting a vibration level with said force sensors; and

means for feeding an obtained frequency to said at least one resonating vibrating element.

20. (New) A dynamic user interface for generating user detectable multi-functional feedback with a single component in response to a stimulus signal in a device that includes a housing, a display, and electronic circuitry located in the housing, the dynamic user interface comprising:

a lens covering the display, the lens having a transparent area placed over the display;

force sensors attached to the lens for detecting a touch against the lens, the force sensors producing a stimulus signal in response to the touch;

at least one resonating vibrating element attached to an area of said lens extending outside of the display, said single component comprising the lens and the at least one resonating vibrating element being operable to produce at least two feedback signals selected from a group

consisting of a haptic feedback signal, a vibratory alert signal, an audio signal, and a buzzer signal;

an electrical drive circuit electrically coupled to said at least one resonating vibrating element for electrically driving said at least one resonating vibrating element with a drive signal based on said stimulus signal;

means for determining a resonance frequency of the housing and the lens by producing a burst frequency sweep;

means for detecting a vibration level with said force sensors; and

means for feeding an obtained frequency to said at least one resonating vibrating element.